Instructions for RUNVOC

Calculating Volatile Organic Compounds (VOCs) in Coatings

Introduction
Manufacturers with coating operations in Massachusetts who file an application for an air permit must complete an additional form for each of the coatings that will be used for any surface coating operation. This form, BWP AQ SFP-1, requires the listing of the "as applied" characteristics for each coating. One of these characteristics is the "pounds of VOC per gallon of solids". To help manufacturers do this complex calculation easily and accurately, OTA developed a computer program called RUNVOC.

This program is currently available only in DOS format.

Hardware Requirements
An IBM-compatible computer and a color monitor (recommended).

How to Use RUNVOC
Standard shop practice is such that coating formulations are made up by volume. That is, the operator adds convenient sized containers of resin (the basic paint), catalyst (hardener), and thinner (reducer). This container may be a pint, quart, or even a dixie cup but whatever is used must be consistent. This is what is meant by the query "How many parts-per-volume of resin (or catalyst, or thinner)?" This program can also be used for resin alone, resin plus thinner, or resin, catalyst and thinner.

Starting RUNVOC
Click on the link DOWNLOAD RUNVOC. This will open a self-extracting zip file containing all the program elements. Select the folder in which you would like the zipped files located, and click on UNZIP. Go to the folder you selected and open the program VOC.EXE.

Screen 1
An introductory screen, with disclaimer. Hit any key to continue.

Please note that the address provided for OTA is no longer valid. Our new address is 100 Cambridge Street, Suite 900, Boston, MA 02114.

Screen 2
The next screen allows you to open a new or existing session.

Screen 3
Whether you select a new or existing session, the third screen will show a description of the coating and application information (if any). At this point, you may input/edit the information.

Screen 4
The next screen requires volume composition information for each of the three components. If you are calculating for resin only, input zeros for catalyst and thinner. Likewise, input a zero for catalyst if calculating only for resin and thinner.

Screen 5
The following screen asks for complete composition information. Once you have entered the data for composition, non-VOC and water, you will enter information for the solvents. Type CTRL-S to get a menu of solvents. The program has a sizable list of solvents (with name, CAS #, and density) built-in. If you do have a solvent that is not in the list, you can enter that information and it will be included in your solvent list. (Hint: you can move around in the solvent list more easily by typing the first letter of the solvent you are looking for.)

When you are finished and there are additional solvents you would like to include, follow the directions shown. No non-VOCs are permitted in the thinner, one only in both the resin and catalyst. They may be of different percentages in each but the density must be the same.

Screen 6
This screen allows you to input emission parameters. Once you have done this and accepted the information, the program will calculate pounds-VOC and pounds-particulates emitted per hour, both before and after controls.

Screen 7
The final data screen gives the results/summary for the session. If you select C(ontinue), the answers you give to the questions will yield a complete SFP1 form. You may then choose to have the program print the SFP1 form.

Screen 8
The closing screen will inform you of the file name of the SFP1 form so that you may rename it in order to save it from being overwritten the next time you run the program.

In order to avoid being too cumbersome, the program will determine if you have more than seven VOC solvents. If you have more than seven, it will generate a screen not shown in the first session. When you have selected the solvents (Screen 5), type CTRL-N and the screen that appears will require you to input solvent data by component. Hit ESC and you will be queried “Leave as is Y/N?.” Hit Y and the composition screen less VOC data will show. Hit ESC again and again you will be queried as before. Hit Y and the emission parameter screen will show. Input data as directed previously to the final results/summary screen.

If you have questions or need assistance using this program, please contact the Massachusetts Office of Technical Assistance at (617) 626-1060. This program may be used for any purpose but may not be republished without acknowledgment to the source. The program is provided "as-is" without expressed or implied warranties. Because of the diversity of conditions under which this program may be used, it may not meet your requirements. OTA specifically requests that users forward any comments or suggestions concerning this program to this office so that we may continuously improve its utility and application.

Massachusetts Office of
Technical Assistance for
Toxics Use Reduction
100 Cambridge Street, Ste. 900
Boston, MA 02114
617.626.1060
617.626.1095 fax
www.mass.gov/ota